

**CLAIMS****What is claimed is:**

- 1 1. A device for cutting a strip of tissue of approximate width W from a  
2 mass of tissue, said device comprising:  
3 an elongate cutting tube having a distal end and a lumen that opens  
4 through an opening in the distal end;  
5 first and second cutting edges being formed on generally opposite  
6 edges of the distal end of the cutting tube said first and second cutting edges  
7 being separated by a distance D;  
8 said cutting tube being advanceable through tissue such that the first  
9 and second cutting edges will cut a strip of tissue having approximate width  
10 W, said approximate width W being approximately equal to the distance D  
11 between the first and second cutting edges.
- 1 2. A device according to Claim 1 wherein the cutting tube comprises a  
2 stainless steel hypodermic tubing.
- 1 3. A device according to Claim 1 further comprising at least one  
2 protruding tip formed on the distal end of the cutting tube.
- 1 4. A device according to Claim 2 wherein the protruding tip is tapered.
- 1 5. A device according to Claim 2 wherein the protruding tip is sufficiently  
2 blunt to be substantially a traumatic.
- 1 6. A device according to Claim 1 wherein the first and second cutting  
2 edges are located on opposite lateral sides of the distal end of the cutting  
3 tube.

- 1 7. A device according to Claim 4 wherein the first and second cutting  
2 edges are located on opposite lateral sides of the distal end of the cutting tube  
3 and the protruding tip is located on the bottom of the distal end of the cutting  
4 tube.
- 1 8. A device according to Claim 7 further comprising a blunt edge located  
2 at the top of the distal end of the cutting tube.
- 1 9. A device according to Claim 1 wherein there is a single bend or curve  
2 formed in the cutting tube.
- 1 10. A device according to Claim 9 wherein there is a single bend of  
2 approximately 20 degrees to approximately 90 degrees formed in the cutting  
3 tube.
- 1 11. A device according to Claim 10 wherein the bend is approximately 90  
2 degrees.
- 1 12. A device according to Claim 1 wherein there are a plurality of bends or  
2 curves formed in the cutting tube.
- 1 13. A device according to Claim 12 wherein there are a plurality of bends  
2 of approximately 20 degrees to approximately 90 degrees each formed in the  
3 cutting tube.
- 1 14. A device according to Claim 12 wherein there is a first bend of  
2 approximately 90 degrees and a second bend of approximately 90 degrees,  
3 formed in the tube.
- 1 15. A device according to Claim 1 further comprising a source of negative  
2 pressure connected to the lumen of the cutting tube so as to aspirate fluid or  
3 matter through the lumen of the tube.

- 1 16. A device according to Claim 1 wherein the device further comprises a  
2 second lumen.
- 1 17. A device according to Claim 16 wherein one of the lumens is  
2 connected to a source of fluid such that fluid may be infused therethrough and  
3 the other of said lumens is connected to a source of negative pressure such  
4 that fluid or matter may be aspirated therethrough.
- 1 18. A device according to Claim 1 wherein at least one of the cutting edges  
2 is heated such that it will cauterize as it cuts.
- 1 19. A device according to Claim 1 further comprising apparatus for  
2 severing the strip of tissue when the strip of tissue has reached a desired  
3 length.
- 1 20. A device according to Claim 19 wherein the apparatus for severing the  
2 strip of tissue comprises at least one electrode which, when energized, will  
3 sever the strip of tissue.
- 1 21. A device according to Claim 1 wherein the device further comprises:  
2 a second tube that has a lumen and a distal end;  
3 wherein the cutting tube extends through the lumen of the outer tube  
4 with a distal portion of the cutting tube extending out of and beyond the distal  
5 end of the outer tube.
- 1 22. A device according to Claim 21 wherein:  
2 the outer diameter of the cutting tube is smaller than the inner diameter  
3 of the second tube such that fluid may flow through the lumen of the second  
4 tube; and  
5 at least one aperture is formed in the second tube to permit fluid to  
6 pass into or out of the lumen of the second tube.

- 1 23. A method for cutting a strip of tissue of width W from a tissue mass,  
2 said method comprising the steps of:
- 3 A) providing a device which comprises;
- 4 i. an elongate cutting tube that has a distal end and a lumen  
5 that opens through an opening in the distal end; and  
6 ii. first and second cutting edges formed on generally opposite  
7 edges of the distal end of the cutting tube, said first and second cutting  
8 edges being separated by a distance D that is approximately equal to  
9 the width W of the strip of tissue to be cut; and
- 10 B) advancing the distal end of the cutting tube through the mass of  
11 tissue such that the first and second cutting edges cut a strip of tissue  
12 of approximate width W.
- 1 24. A method according to Claim 23 wherein the mass of tissue is *in vivo*.
- 1 25. A method according to Claim 23 wherein the mass of tissue is *in vitro*.
- 1 26. A method according to Claim 23 wherein the mass of tissue is located  
2 within the body of a human or animal subject.
- 1 27. A method according to Claim 26 wherein the strip of tissue is removed  
2 for a diagnostic or therapeutic purpose.
- 1 28. A method according to Claim 27 wherein the subject suffers from  
2 glaucoma and wherein the method is carried out to remove a strip of  
3 trabecular meshwork from an eye of the subject to facilitate drainage of  
4 aqueous humor from the eye thereby lowering intraocular pressure.
- 1 29. A method according to Claim 28 wherein Step B comprises:  
2 inserting the device into the anterior chamber of the eye;  
3 positioning the distal end of the cutting tube adjacent to or within the  
4 trabecular meshwork of the eye; and

5           advancing the cutting tube such that the cutting edges cut a strip of  
6   approximate width W from the trabecular meshwork.

1   30.    A method according to Claim 29 wherein the device provided in Step A  
2   of the method further comprises a protruding tip and wherein the protruding tip  
3   is advanced through the trabecular meshwork and into Schlemm's Canal and,  
4   thereafter, the protruding tip is advanced through Schlemm's Canal as the  
5   cutting tube is advanced to cut the strip of tissue.

1   31.    A method according to Claim 23 wherein the device provided in Step A  
2   further comprises apparatus for severing the strip of tissue after the strip of  
3   tissue has reached a desired length and wherein the method further  
4   comprises the step of:

5           C)    severing the strip of tissue after the strip of tissue has reached a  
6   desired length.

1   32.    A method according to Claim 23 wherein the method is carried out to  
2   form an incision in skin, mucous membrane, an organ, a tumor or other  
3   anatomical structure.

1   33.    A method according to Claim 23 further comprising the step of:

2           C)    removing the strip of tissue through the lumen of the cutting  
3   tube.

1   34.    A method according to Claim 33 wherein the lumen of the cutting tube  
2   is attached to a source of negative pressure to aspirate the strip of tissue  
3   through the lumen of the cutting tube.

1   35.    A method according to Claim 23 wherein the device provided in Step A  
2   further comprises a second lumen and wherein the method further comprises:  
3           infusing a fluid through one of said lumens; and  
4           aspirating fluid and/or matter through the other of said lumens.